# 380D Néo Series

## 32-bit Digital-to-Analog Converter

DSD
Direct Stream Digital

DXD
Digital eXtreme Definition

# Owner's Manual

MOON
by SIMAUDIO

## Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves or another apparatus that produces heat.
9. Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for safety. If the provided plug does not fit into the outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus. Unplug mains cord during transportation.
11. Only use attachments and accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when the power cord or plug has been damaged; liquid has been spilled or objects have fallen into the apparatus; or the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. No naked flame sources, such as candles, should be placed on the apparatus.

**WARNING:**
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.

FCC information for **MOON 380D** Digital-to-Analog Converters equipped with the **MiND** Music Streamer module:

This unit contains Transmitter Module FCC ID : ZUCSEDMP3. This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

## Important Safety Instructions (cont'd)

The lightning flash with the arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Marking by the "CE" symbol (shown left) indicates compliance of this device with the EMC (Electromagnetic Compatibility) and LVD (Low Voltage Directive) standards of the European Community

***Please read all instructions and precautions carefully and completely before operating your Nēo 380D D/A Converter***

1. **ALWAYS** disconnect your entire system from the AC mains before connecting or disconnecting any cables, or when cleaning any component. To completely disconnect this apparatus from the AC mains, disconnect the power supply cord plug from the AC receptacle.
2. The Nēo 380D must be terminated with a three-conductor AC mains power cord which includes an earth ground connection. To prevent shock hazard, all three connections must **ALWAYS** be used. Connect the Nēo 380D only to an AC source of the proper voltage; Both the shipping box and rear panel serial number label will indicate the correct voltage. Use of any other voltage will likely damage the unit and void the warranty
3. AC extension cords are **NOT** recommended for use with this product. The mains plug of the power supply cord shall remain readily accessible.
4. **NEVER** use flammable or combustible chemicals for cleaning audio components.
5. **NEVER** operate the Nēo 380D with any covers removed. There are no user-serviceable parts inside. An open unit, especially if it is still connected to an AC source, presents a potentially lethal shock hazard. Refer all questions to authorized service personnel only.
6. **NEVER** wet the inside of the Nēo 380D with any liquid. If a liquid substance does enter your Nēo 380D, immediately disconnect it from the AC mains and take it to your MOON dealer for a complete check-up.
7. **NEVER** spill or pour liquids directly onto the Nēo 380D.
8. **NEVER** block air flow through ventilation slots or heatsinks.
9. **NEVER** bypass any fuse.
10. **NEVER** replace any fuse with a value or type other than those specified
11. **NEVER** attempt to repair the Nēo 380D. If a problem occurs contact your MOON dealer.
12. **NEVER** expose the Nēo 380D to extremely high or low temperatures.
13. **NEVER** operate the Nēo 380D in an explosive atmosphere.
14. **ALWAYS** keep electrical equipment out of reach of children.
15. **ALWAYS** unplug sensitive electronic equipment during lightning storms.
16. **WARNING:** Do not expose batteries or battery pack to excessive heat such as sunshine, or fire or the like.

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# Introduction

Thank you for selecting the **MOON Nēo 380D** Digital-to-Analog Converter (DAC) as a part of your music/cinema system. This component has been designed to offer state-of-the-art high-end performance in an elegant package, while retaining all the sonic hallmarks on which Simaudio has made its reputation. We have spared no effort to ensure that it is amongst ***the finest*** DAC's available in its class. We have been building high-performance audio equipment for over 30 years, and the know-how gained through our cumulative experience is an important reason why **MOON** DACs are so musically satisfying.

The performance of your **Nēo 380D** will continue to improve during the first 400 hours of listening. This is the result of a "break-in" period required for the numerous high quality electronic parts used throughout this DAC.

Before setting up your new **380D**, we encourage you to please read this manual thoroughly to properly acquaint yourself with its features. We hope you enjoy listening to the **Nēo 380D** DAC as much as the pride we have taken in creating this fine audio product. We understand the power and emotion of music and build our products with the goal of faithfully capturing these elusive qualities.

The information contained in this manual is subject to change without notice. The most current version of this manual is available on our official website at http://www.simaudio.com

Your **Nēo 380D** Digital-to-Analog Converter incorporates many significant design features to achieve its "world class" level of performance. This is an abbreviated list of the more important features:

ESS Technology **SABRE$^{32}$ Ultra DAC/Digital Filter** working in **32-bit Hyperstream™** to achieve unprecedented jitter immunity and low-level linearity via a patented **Time Domain Jitter Eliminator.**

Digital Audio Signal Processing using **M-AJiC32** (MOON Asynchronous Jitter Control in 32-bit mode)

**Eight (8) digital inputs** (AES/EBU x 2, S/PDIF x 3, TosLink x 2 and USB x 1) allowing for a connection to virtually any digital source, along with **one (1) digital output** – S/PDIF.

Supports **DSD64**, **DSD128** and **DSD256** (USB input only); PCM 16-bit/44.4kHz to 24-bit/192kHz (all inputs) and up to **PCM 32-bit/384kHz** DXD (USB input only).

*Optional* "**MiND"** (MOON intelligent Network Device) module (9$^{th}$ input) via WiFi or Ethernet input for multi-room streaming.

*Optional* variable analog outputs (balanced & single-ended) using **M-eVOL** volume circuit which was originally developed for the MOON Evolution series. Accessible using the remote control, this volume operates in 1dB increments. **M-eVOL** is based on a resistive array configuration with no sonic degradation of the audio signal at all volume settings.

Full **digital monitor loop** on S/PDIF to accommodate external devices such as a room correction component.

**Separate digital and analog power supplies**, each using a toroidal transformer and 11 stages of voltage regulation.

**"Dual Jitter Control System"** producing a digital signal that is virtually jitter-free, measuring below "1 picosecond" as well as ensuring compatibility with virtually any digital device.

**USB input with galvanic isolation** which eliminates all ground current (i.e. no electrical connection) between the USB device (computer,music server, etc) and the 380D, preserving the accuracy of the audio signal.

**RS-232** port for (i) full unsolicited bidirectional feedback and (ii) firmware updates; **12 Volt trigger** output for remote operation; **IR input** for external control with aftermarket infrared remote control receivers and **SimLink**™ controller ports that allow for 2-way communications between other MOON components.

**Rigid chassis construction** to minimize the effects of external vibrations.

Designed to be **powered up at all times** for optimal performance.

## Unpacking

The **Nēo 380D** should be removed from its box with care.

The following accessories should be included inside the box with your Digital-to-Analog Converter:

- ✓ *AC power cable*
- ✓ *'CRM-2' remote control with two 'AA' batteries*
- ✓ *'SimLink™' cable with 1/8" mini plug terminations on each end*
- ✓ *Wi-Fi antenna for "**MiND"** Music Streamer equipped version of the Nēo 380D*
- ✓ *This owner's manual*
- ✓ *Warranty and product registration information (USA and Canada only)*

Once the **Nēo 380D** is unpacked, inspect it thoroughly and report any damage to your dealer immediately. We suggest that you keep all of the original packaging, storing it in a safe, dry place in case you're required to transport this product. The customized packaging is specially designed to protect the **380D** from any potential damage during transit.

Please write the serial number of your new **Nēo 380D** in the space provided below for future reference.

**Serial Number** _____

## Installation & Placement

The **Nēo 380D** requires only minimal ventilation to maintain an optimum and consistent operating temperature. However, you should avoid placing it near a heat source as this could compromise the Digital-to-Analog Converter's performance and reliability. As well, it should be placed on a solid level surface. The **380D** uses toroidal transformers; even though they are well shielded, you should not place the Digital-to-Analog Converter too close to source components sensitive to EMI, such as a turntables.

In the event that your **Nēo 380D** is equipped with the "**MiND**" Music Streamer option and you intend to use its wireless streaming feature (between your wireless router and your **380D**), you must install the included Wi-Fi antenna on the back panel by screwing it into the socket labelled "WIFI ANT".

***For Nēo 380D's equipped with the optional "MiND" Music Streamer, please visit our website to download PDF versions of both the "MiND Setup Guide" and "MiND App User Guide".***

***If you intend to use the Nēo 380D's USB input connection (PCM or DSD) with a Windows-based computer, you will need to install our USB HD DSD driver, which can be downloaded from the support section of our website.***

***<u>Note:</u> Apple-based computers don't require this driver.***

## Front Panel Controls

Figure 1: Nēo 380D Front panel

The front panel will look similar to Figure 1 (above). The large digital display window indicates the selected digital input ("D1" thru "D8") its corresponding sampling frequency in kHz ("44.1" thru "192.0") of the source material currently being played. The "Standby" button disengages all outputs from the rest of the **Nēo 380D's** circuitry and turns off the digital display. However, when in "Standby" mode, all digital and analog audio circuitry remains powered up to help maintain optimal performance. When switching back from "Standby" to the "on" mode, the selected 'input' will be memorized from the previous listening session. The blue indicator LED turns off when the **380D** is in "Standby" mode.

The "Display" button allows you to turn the digital display on and off. The "Mute" button mutes all analog output signals. Pressing the "Mute" button a second time will reinstate all analog output signals. When the output signal is muted, the aforementioned contents in the digital display window will repeatedly flash on and off.

The "Digital Monitor" button provides for a dedicated loop to be used with either a digital audio component that can record & playback (DAT, CD-Recorder, etc.) or a digital signal processor such as a room correction device. Pressing this button allows you to (1) monitor the recording as it occurs on the recording device or (2) engage the effects of the signal processor. The monitor component's digital output must be connected to the **380D**'s "Digital Monitor In" and its digital input must be connected to the **380D**'s "Digital Monitor Out". The corresponding LED to the right of the display window will illuminate when the "Digital Monitor" function is engaged.

The two (2) buttons labeled "◄ Input ►" allow you to sequentially scroll, either forward "►" or backward "◄" through all the digital inputs. The inputs are ordered as follows going forward (►): "D1", "D2", "D3" , "D4" , "D5" , "D6" , "D7" and "D8". When you change inputs, the display window will show the new digital input and briefly four (4) dashes "----". These dashes indicate that the **Nēo 380D** is in the process of locking onto a digital signal – this may take several seconds. Once the **380D** successfully locks onto the digital signal, the four dashes will be replaced by the sampling rate frequency of this digital signal. When the selected digital input signal cannot be locked onto, "----" remains in the display window. The **380D** is capable of processing a PCM digital signal at one of the following eight (8) different sampling rates: "44.1", "48.0", "88.2", "96.0" , "176.4" , "192.0" , "352.8" and "384.0" (all in kHz) or a DSD digital signal at one of the following three (3) data rates DSD64 (2.82MHz), DSD128 (5.64MHz) and DSD256 (11.28MHz); For DSD input signals, the corresponding information will appear in the display window as "DSd" , "DSd.2" and "DSd.4" for these data rates, respectively.

***Notes: (i) DSD format signals can ONLY be played through the USB ("D8") input. (ii) PCM format signals with sample-rates of 352.8kHz and 384kHz can ONLY be played through the USB ("D8") input (iii) The digital outputs are not enabled when the D8 (USB) or D9 (Network) input is selected .***

A corresponding red LED, located to the right of the display window, will turn onbased on selected input type: "TOSLINK" (for "D6" and "D7") , "S/PDIF" ("D3", "D4" and "D5"), "AES/EBU" ("D1" and "D2") or "USB" ("D8"). Note: you cannot connect a USB flash drive or external hard drive to the "D8" input.

If your **Nēo 380D** is equipped with the *optional* "MiND" music streaming module, the assigned input is "D9", the sampling rate will appear in the display as it does for inputs "D1" thru "D8", and the red "NETWORK" LED will illuminate

## Rear Panel Connections

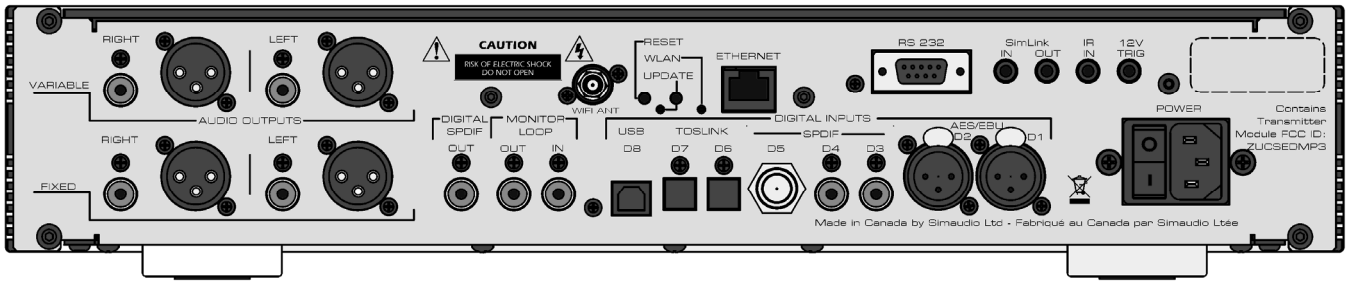


Figure 2: Nēo 380D Rear panel

The rear panel will look similar to Figure 2 (above). On the left side are two rows of analog outputs; The bottom row has two pairs labeled "Right" and "Left", each with a single-ended RCA and balanced XLR connector. These are "Fixed Level" outputs, intended to be connected to a line-level input on either your preamplifier or integrated amplifier. The top row also has two pairs labeled "Right" and "Left", each with a single-ended RCA and balanced XLR connector. These are the OPTIONAL "Variable Level" outputs, whereby the volume level can only be adjusted using the included remote control. These are meant to be connected directly to your power amplifier's input; They can be also connected to a line-level input on either your preamplifier or integrated amplifier. We strongly recommend that you use the balanced XLR connectors on your **380D** to maximize its level of performance. Don't hesitate to use high quality interconnect cables*. Poor quality interconnect cables can degrade the overall sonic performance of your system.

There is one "Digital SPDIF Output" on an RCA connector, immediately followed by the SPDIF digital "Monitor Loop" with one input and one output, both on RCA connectors. Next is a group of eight (8) "Digital Inputs" labelled "D1" thru "D8". Inputs "D1" and "D2" are AES/EBU on 3-pin XLR connectors and they benefit most from cables with an impedance of 110Ω. Inputs "D3", "D4" and "D5" are S/PDIF – the first two on RCA connectors and the third on a BNC connector, benefitting most from cables with an impedance of 75Ω. Inputs "D6" and "D7" are Optical and use a Toslink connector. Finally, input "D8" is USB type-B connector. Don't hesitate to use high quality digital interconnect cables*.

The space directly above the row of digital inputs is reserved for the *optional "* MiND" Music Streamer. If your **Nēo 380D** is equipped with the "MiND" option, you will see a socket for a WiFi antenna and a RJ45 ethernet connector socket. Please consult the "MiND Setup Guide" and "MiND User Guide" for further details.

The upper right side of the rear panel has various connectors for external communications. The **Nēo 380D** is equipped with full-function bi-directional RS-232 port control and status for custom integration or automation, as well as future software updates. Next to the RS-232 port are two (2) "SimLink™" connectors labeled "in" and "out" on 1/8" mini jacks. Please refer to the next section entitled SimLink™ for more details. Then there is a 1/8" mini-jack input for use with aftermarket infrared remote control receivers. Finally, there's a 12V trigger output on a 1/8" mini-jack.

On the far right side is the main power switch ("0"=off, "1"=on), the IEC receptacle, labeled "AC Input" for the included AC power cord, and the "AC Fuse" socket cover. Connect the supplied AC power cable to the IEC receptacle. Ensure that the AC wall outlet you use has a functioning ground. For the best sonic performance, it is preferable that you plug your **380D** directly into a dedicated AC outlet and avoid using an extension cord. If you have the time and willingness, consider installing a superior quality AC wall outlet such as a hospital grade Hubbell*****.

***** Please speak with your MOON Authorized Retailer about the benefits of high quality cables for your system, and superior quality AC wall outlet.

## SimLink™

The main feature of SimLink™ on the **Nēo 380D**, involves the "Standby" function. By pressing down and holding the "Standby" button for 2 seconds on the **380D**, all other **MOON** components connected via the SimLink will go into "Standby" mode along with the **380D.** The same logic applies when switching from "Standby" to active mode. However, if your **Nēo 380D** is equipped with both the "MiND" Music Streamer and the variable analog outputs, then the SimLink™ offers many more features: Volume, Mute, Standby. Digital Input Selection all via the "MiND" app running on your Apple or Android device.

If you are using an external "MiND" Music Streamer with your **380D** you should make a SimLink™ connection between the "MiND"s SimLink™ out and the **380D**'s SimLink™ in. When you press the ▶ (play) button on the "MiND" App, the **380D** will automatically switch to the "D1" input. You can change the default for the "MiND" as follows: Select the input that you want as the new default for "MiND", then press and hold the **INPUT** ▶ (right) button until the front panel display briefly shows 'Str".

If you are using a MOON CD Transport or CD Player with your **380D** you should make a SimLink™ connection between the "CD"s SimLink™ out and the **380D**'s SimLink™ in. The default input is the "D3" which means that when you press the ▶ (play) button on the CD, the **380D** will automatically switch to the "D3" input. You can change the default for the "CD" as follows: Select the input that you want as the new default for "CD", then press and hold the **INPUT** ◀ (left) button until the front panel display briefly shows "CD".

The connection rules for the SimLink™ are very straightforward. You must always connect the supplied cable between one component's "SimLink™ Out" jack and another component's "SimLink™ In" jack. If you inadvertently connect the cable between either two "SimLink™ In" or two "SimLink™ Out" jacks, the SimLink™ communication feature will not function. Also, there is no master component in a SimLink™ chain; no one particular component operates as the main communications controller. If you are using your **Nēo 380D** with an older MOON product such as a P-7, P-8 or i-7, you will need to update the software of the older product to allow for complete SimLink™ functionality. Contact your retailer for further details.

# Operating the 380D

We recommend leaving your **Nēo 380D** powered up at all times to maintain optimal performance. When you plan on being away for a few days, it may not be a bad idea to power off your DAC. Please keep in mind that once fully "broken-in", your **380D** requires several hours of operation before reaching optimal performance after powering it up again.

### Turning on your Nēo 380D for the first time

Prior to turning the DAC on for the first time, make sure that every cable is properly connected to avoid any problems. Flick the main rocker switch, located on the rear panel, labeled "POWER" to the '1' (on) position. Next, briefly press the push button labeled "Standby" located on the front panel. You will hear a very faint click sound confirming that everything is in order. The blue LED on the front panel will illuminate, indicating that the **380D** is now powered up and ready for use.

### On and Off Sequence

To avoid having any annoying noises (ie. "thumps" and "pops") emanate from your speakers when powering your **380D** on or off, you should always power up your **380D** before powering up your preamplifier, integrated amplifier or power amplifier**.** As well, always power down your **380D** after powering down your preamplifier, integrated amplifier or power amplifier.

## Balanced Operation

When using an unbalanced interconnect, the audio signal runs through both the center wire and the shield/ground wire. Any noise picked up by this interconnect (ie. nearby magnetic fields such as an AC power cord) will be reproduced by both the preamplifier and amplifier, then heard through the loudspeakers. Conversely, a balanced interconnect has three separate conductors; one for the ground and two for the actual signal. These two signals are identical except that one is 180 degrees out of phase with the other. For example, when one conductor is carrying a signal of +4 Volts, the other will be carrying a signal of –4 Volts. When these two inverted signals on a balanced line are output from the **Nēo 380D**, any noise picked up by the interconnect will be eliminated since a differential circuit amplifies only the difference between these two signals: Noise on a balanced interconnect will be equal on both conductors and therefore cancel out.

## Remote Control Operation

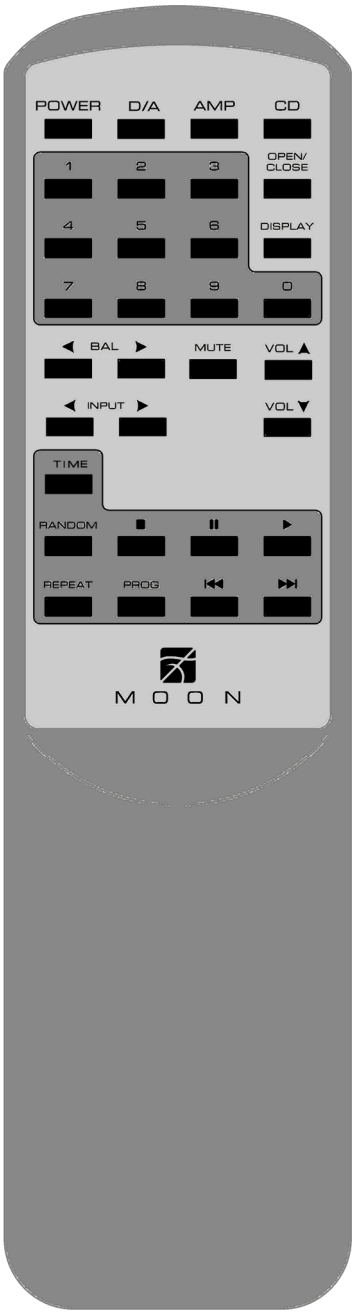


Figure 3: CRM-2 Remote Control

The **Nēo 380D** Digital-to-Analog Converter uses the **'CRM-2'** full-function remote control (figure 6). It operates on the Philips RC-5 communication protocol and is can be used with other Simaudio MOON components.

The **'CRM-2'** remote uses two AA batteries (included). To install them, simply slide the back plate off in the direction of the arrow; insert the batteries in the correct direction and then replace the back plate.

To engage the **'CRM-2'** remote for use with the **Nēo 380D**, you must first press the button labeled **D/A**.

The **POWER** button located on the upper left will switch the Digital-to-Analog Converter to either 'Standby' or 'On' mode.

The **DISPLAY** button turns the front panel display on and off.

The 2 buttons labelled ◄ **INPUT** ► allow you to sequentially scroll, either backwards or forwards, through all eight (8) available inputs. For example, to switch from "D4" to "D1" you may press either ◄ **INPUT** three (3) times or **INPUT** ► five (5) times. Pressing and holding down either of these buttons results in only a single change to the selected input.

The **MUTE** button turns off the output volume. Pressing the "Mute" button a second time will reinstate the output volume level back to its current setting.

***For* Nēo *380D's equipped with the optional volume control:***

The 2 buttons labelled ▼ **VOL** ▲ allow you to control the volume level. Pressing ▼ **VOL** results in a decrease in the volume level; Pressing **VOL** ▲ results in an increase in the volume level. You may either press and hold these buttons down or press them briefly to make volume adjustments.

**NOTE:** The buttons labelled ◄**BAL**► don't affect the operation of the **380D**.

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**Remote operation with multiple MOON components**

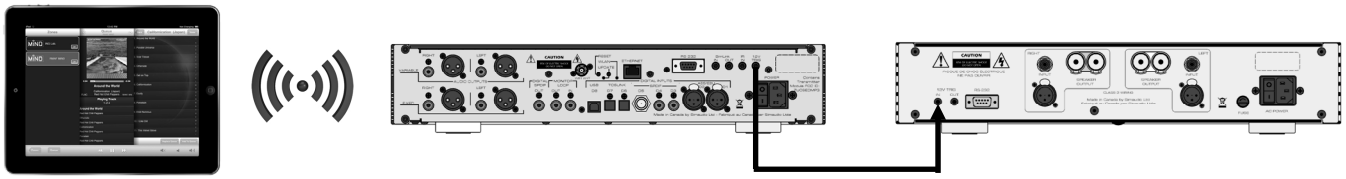

Figure 4: Remote Operation with 12V Trigger

In figure 4 we have a **Nēo 380D,** equipped with both the "MiND" and variable output options, connected to a **330A** Amplifier via their respective 12V triggers (using a 1/8" mini-jack cable); The 12V trigger output on the **380D** is connected to the 12V trigger input on the **330A.** When you launch the "MiND" on your Apple smart device (full list on the MiND page of our website)and select this system's ZONE, the **330A** will automatically turn on. To shut down the system, press "Off" for this ZONE in the "MiND" app.

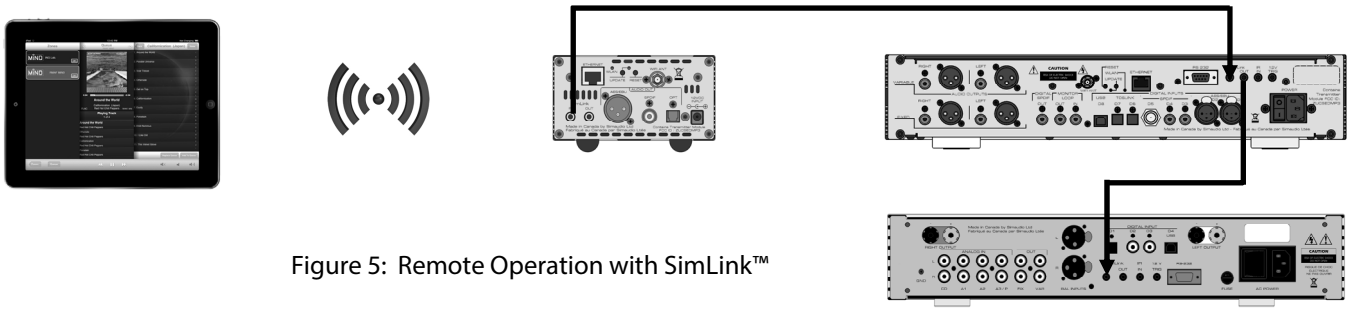

Figure 5: Remote Operation with SimLink™

In figure 5 we have a 180 MiND Music Streamer connected to a **Nēo 380D** DAC via their respective SimLink™ ports (using a 1/8" mini-jack cable), and the **380D** connected to a **340i** Integrated Amplifier also via their respective SimLink™ ports. When you launch the MiND App on your Apple smart device and select this system's ZONE, the 180 MiND, **380D** and **340i** will alll turn on. As well, the **380D** will automatically switch to the MiND input. To shut down the system, press "Off" for this ZONE in the MiND app.

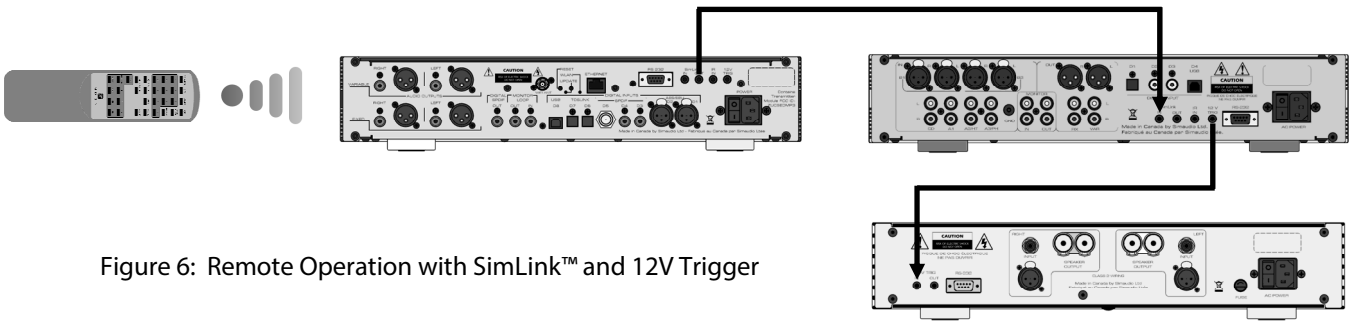

Figure 6: Remote Operation with SimLink™ and 12V Trigger

In figure 6 we have a **Nēo 380D** DAC connected to a **350P** Preamplifier via their respective SimLink™ ports (using a 1/8" mini-jack cable), and the **350P** is connected to a **330A** Amplifier via their respective 12V triggers (also using a 1/8" mini-jack cable). When you turn on the **380D** via remote control (or its Standby button), both the **350P** and **330A** will turn on automatically. The same rule applies when you put the **380D** into Standby mode.

# Specifications

| | |
|---|---|
| Configuration | Balanced Differential, Stereo |
| Digital / Analog Power Supply Transformers | 25VA / 10VA |
| Power Supply Capacitance | 26,400µF |
| Digital Filter / Digital-to-Analog Converters | ESS ES9016 Sabre$^{32}$ 32-bit Hyperstream™ |
| Frequency Response (full range) | 2Hz - 100kHz +0/-3dB |
| THD @1kHz, 0dBFS (A-weighted) | < 0.001% |
| Intermodulation Distortion | < 0.001% |
| Dynamic Range | > 120dB |
| Signal-to-noise Ratio | > 120dB @ full output |
| Slew Rate | 50V/µs |
| Channel Separation | > 116dB |
| Low Level Linearity | < ±0.25dB at -90dBFS |
| Intrinsic Jitter | 1 picosecond RMS 32-bit |
| Analog Outputs – Balanced | 1 pair XLR – Fixed Level |
| Analog Outputs – Single Ended | 1 pair RCA – Fixed Leve |
| Max. Analog Output @ 0dBFS - XLR / RCA | 2.0 Volts – Fixed Level |
| *Optional Analog Outputs – Balanced* | *1 pair XLR – Variable Level* |
| *Optional Analog Outputs – Single Ended* | *1 pair RCA – Variable Level* |
| *Max. Analog Output @ 0dBFS - XLR / RCA* | *4.0 Volts – Variable Level* |
| Analog Output Impedance - XLR / RCA | 100Ω |
| DSD Data Rates | (2.8224MHz), Double (5.6448MHz) & Quadruple (11.2896) |
| DSD Sample Rates | DSD 64, DSD 128 & DSD256 **via USB only** |
| PCM Bit-depth range | 16 - 32 bits (32-bit via USB only) |
| PCM Sampling Frequency Rates | 44.1 - 384kHz (352.8 & 384kHz **via USB only**) |
| Digital Inputs (8) | 2 x AES/EBU , 3 x S/PDIF, 2 x TosLink, 1 x USB |
| Digital Outputs (1) | S/PDIF |
| Digital Monitor Loop | S/PDIF - 1 input / 1 output |
| Remote Control | Full-Function CRM-2 |
| Power Consumption @ idle | 10 watts |
| AC Power Requirements | 120V / 60Hz or 240V / 50Hz |
| Shipping Weight | 16 lbs / 7.5 Kgs |
| Dimensions (W x H x D, inches / cm) | 16.9 x 3.4 x 13.1 / 42.9 x 8.6 x 33.3 |

# Specifications (cont'd)

**Balanced Pin Assignment:**

| | |
|---|---|
| Pin 1 | Ground |
| Pin 2 | Positive |
| Pin 3 | Negative |

***Optional MiND Music Streamer:***

| | |
|---|---|
| Signal Input – Wired | 100Base-T RJ45 Ethernet interface |
| Signal Input – Wireless | IEEE 802.11 b/g/n Wi-Fi interface |

**NOTE:** If you require the RS-232 codes for your **Nēo 380D**, please visit the "Contact Us" page and complete the "Information request" form on our website at www.simaudio.com.

Fuse Replacements:

| |
|---|
| 120V version uses a 0.2A slow blow (5 x 20mm). |
| 230V version uses a 0.1A slow blow (5 x 20mm). |